

UNITED STATES NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report of Construction Inspection

IE Inspection Report No. 050-346/76-14

Licensee: Toledo Edison Company  
Edison Plaza  
300 Madison Avenue  
Toledo, Ohio 43652

Davis-Besse Nuclear Power Station  
Unit 1  
Oak Harbor, Ohio

License No. CPPR-80  
Category: B

Type of Licensee: PWR (B&W) 872 MWe

Type of Inspection: Special, Announced

Dates of Inspection: July 13-15, 1976

Principal Inspector: *K. R. Naidu*  
K. R. Naidu

7-21-76  
(Date)

Accompanying Inspectors: None

Other Accompanying Personnel: None

Reviewed By: *D. W. Hayes*  
D. W. Hayes, Chief  
Projects Section

7/30/76  
(Date)

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## SUMMARY OF FINDINGS

### Inspection Summary

Inspection of July 13-15, 1976 (76-14): Special inspection, reviewed documentation and made observations of areas relative to the resolution of previously identified unresolved matters, reviewed procedures relative to the Steam Generator Secondary Hydro Test and observed work being performed.

### Enforcement Action

#### Deficiency

Contrary to the requirements of 10 CFR 50, Appendix B, Criterion XII, the licensee failed to assure the use of a properly calibrated temperature indicator in the Steam Generator Hydrostatic Test. This situation was corrected by the licensee prior to reaching a critical pressure. (Paragraph 2, Report Details)

### Licensee Action Previously Identified Enforcement Matters

Not applicable.

### Other Significant Findings

#### A. Systems and Components

The Steam Generator Secondary Hydrostatic Test is in progress.

#### B. Facility Items (Plans and Procedures)

None.

#### C. Managerial Items

The inspector was informed that Bechtel Corporation has made a personnel change at Davis-Besse, Unit 1 site. Mr. R. Rosenthal has replaced Mr. J. B. Olmstead as the Bechtel Project Manager for Davis-Besse, Unit 1.

#### D. Noncompliance Identified and Corrected by Licensee

None.

#### E. Deviations

None.

F. Status of Previously Reported Unresolved Items

1. Inappropriate Closure of Noncomformance Reports (NCRs)  
(Inspection Reports No. 050-346/75-03, No. 050-346/75-07, No. 050-346/75-13, No. 050-346/75-16, No. 050-346/76-20, No. 050-346/75-23, No. 050-346/75-24 and No. 050-346/76-02)

Documentation received from CVI Corporation regarding the charcoal used in the filters is considered to be in complete. This item remains unresolved. (Paragraph 1, Report Details)

2. Incomplete Test Data (IE Inspection Reports No. 050-346/75-03, No. 050-346/75-07, No. 050-346/75-13, No. 050-346/75-16, No. 050-346/75-20, No. 050-346/75-23, No. 050-346/75-24 and No. 050-346/75-02)

Documentation on the "minimum elongation before rupture" tests on the filters was available at the site. The inspector reviewed the test results from Flanders Filters, Inc. and determined that the elongation tests met the requirements of Item 7, Paragraph 8.1.1.(A2) of Specification No. 7749-M-404, Revision 7. This item is considered closed.

3. Motor-Operated Valves (IE Inspection Reports No. 050-346/75-15, No. 050-346/75-16, No. 050-346/75-20, No. 050-346/75-23, No. 050-346/75-24 and No. 050-346/76-02)

Documentation on the valve body seismic requirements have not been received for valves supplied by Velan, Montreal, Canada. This item remains unresolved.

Management Interview

- A. The following persons attended the management interview at the conclusion of the inspection.

Bechtel Corporation Gaithersburg (Bechtel)

- P. Anas, Project Engineer
- R. Rosenthal, Project Manager

Toledo Edison Company (TECO)

- J. C. Buck, Field Quality Assurance Engineer
- C. T. Daft, Field Quality Assurance Engineer
- G. Eichenauer, Quality Assurance Field Representative

T. D. Murray, Operations Engineer  
L. E. Roe, Vice President  
E. M. Wilcox, Field Quality Assurance Specialist

Nuclear Regulatory Commission

T. L. Harpster, Reactor Inspector, Operations

B. Matters discussed and comments on the part of the management personnel were as follows:

1. The inspector stated that the main purposes of this inspection were to review the status of previously identified unresolved matters, procedures relative to the Steam Generator Secondary Hydrostatic Test and to observe work being performed on the Hydro.
2. The inspector stated that one of the previously identified unresolved items was being closed and the others remain open pending receipt of further information.
3. The inspector stated that during review of the records being maintained relative to the Steam Generator Secondary Hydrostatic Test, he determined that appropriate details were being omitted. The licensee stated that the personnel would be instructed to record sufficient details in the documentation.

The inspector stated that one deficiency was identified relative to the calibration of a temperature indicator and no reply is required since the item was corrected prior to the commencement of the Hydro and prior to the conclusion of the inspection.

## REPORT DETAILS

### Persons Contacted

The following persons, in addition to those listed in the Management Interview section of this report, were contacted during this inspection.

#### Toledo Edison Company (TECO)

L. Kurfis, I&C Foreman  
J. Orkins, I&C Engineer  
J. Zell, Test Leader

#### ITT Grinnell Company (Grinnell)

J. Pomrik, QC Supervisor, Installed Material

#### 1. Inappropriate Closure of Nonconformance Report (NCRs)

During previous inspection (See Inspection Report No. 050-346/75-03) it was determined that NCRs 376 and 339 were closed even though deficiencies identified in the NCRs were not resolved. As a result of the inspection findings, NCRs 713 dated June 6, 1975 and NCR 665 dated April 2, 1975, were generated identifying the outstanding deficiencies. This item remains open.

The inspector reviewed the status of corrective action taken on the findings of the special in-depth review that was conducted by Stearns-Roger (S-R) relative to NCRs contained in Bechtel QA vault. To-date about 90% of the inappropriately closed NCRs identified by S-R is reported to be approved and closed by TECO QA. The inspector was informed that TECO QA has requested S-R to complete a final report based on 88% sampling completed as of May 18, 1976. The inspector was informed that TECO QA will continue to follow up on corrective action and will complete any open items identified in the above audit program. The inspector selectively reviewed completed items and determined that items were appropriately resolved.

#### 2. Observation of Steam Generator Hydrostatic Test (SGHT)

The inspector reviewed TP 200.09, the test procedure for the SGHT and the current revisions and determined that it contained the necessary approvals. The procedure was determined acceptable.

During the inspection, the inspector noticed a temperature indicator affixed with expired calibration due date being used to read the Steam Generator Skin temperature. Further scrutiny, indicated the original multi-channel temperature indicator which was noticed to provide erroneous indications was replaced with a temperature indicator which was only calibrated at three points namely 0<sup>o</sup>, 100<sup>o</sup>F, and 200<sup>o</sup>F. The inspector reminded the licensee of the necessity of using a fully calibrated temperature indicator to assure not exceeding the NDTT. The inspector informed the licensee that this was a deficiency contrary to the requirements of 10 CFR 50, Appendix B, Criterion XII. The licensee corrected the situation and replaced the existing instrument with a calibrated digital temperature indicator prior to reaching a critical pressure of the Hydro Test. Instructions to preclude recurrence are to be issued.

The inspector pointed out to the licensee that the QC should have identified this discrepancy and documented it in a NCR. Prior to the conclusion of the inspection, a NCR was written documenting the use of an uncalibrated instrument.

The inspector reviewed the water chemistry analysis and determined that sufficient explanations were not being documented in cases where the water analysis exceeded the limits specified in Paragraph 5.12.1 TP 200.09. In one, the water sample from the Steam Generator indicated that the cation conductivity was well over the limit. The next analysis indicated a considerable drop with no explanation documented. The inspector was informed that the licensee noticed the high cation conductivity, the situation was analyzed with their appropriate personnel and was determined to be due to the initial impurities in the steam generator. Corrective action was reportedly taken to repeatedly drain the water till the cation conductivity decreased. The results of subsequent analysis had been recorded, which indicated a significant drop in the cation conductivity. The operation personnel acknowledged the need for complete documentation and informed the inspector that necessary instructions would be provided to the test personnel. The licensee's representative stated that verbal instructions emphasizing the necessity of complying with each detail of such procedural and QA requirements have been given to those responsible for this work.

3. Review of Documentation on Containment Air Cooling Fans

During a previous inspection (Inspection Report No. 050-346/75-18), documentation was not available to indicate that the fan motors were tested and determined to satisfactorily operate under the service conditions listed in Paragraph 7.2.2 of Technical Specification 7749-M-400. During the current inspection, the inspector reviewed the updating of the incomplete documentation. It consisted of the Bill of Material 600 276-17 of Joy Manufacturing, (the fan supplier)

to Reliance Electric Company, (the fan motor manufacturer) along with Specification No. FF 12642, sheets 1 through 4 which specified the design parameters for the radiation environment in which the motors should operate. Reliance provided Joy with certificates of conformance that the motors were built to Joy's Bill of Materials 600 276-17. Certificates were provided by Reliance that the air cooler fan motors would operate under the service conditions enumerated in Paragraph 7.2.2 of Specification No. 7749-M-400 with no deleterious effects. The inspector stated that he considered the documentation adequate.

4. Review of Installed Pipe Hangers Inspections

The inspector reviewed the status of the inspections being performed by ITT Grinnell on the installed pipe hangers. The IE:III inspector was informed that Grinnell QC inspectors walk the line and inspect the installed hanger to verify whether the installation is in accordance with the respective drawings. The findings are documented on the field drawings and are analyzed by Grinnell Engineering for 2-inch and above pipe hangers. For 2-inch and under pipe hangers, the drawings with findings are submitted to Bechtel Engineering for analysis, approvals or corrective action. As built drawing are generated after corrective action is implemented wherever necessary. Final inspections are conducted after the completion of field work (where applicable) with final as-built drawings using a 17 point engineered hangers pipe support inspection checklist. The inspector noted that the actual type of fasteners used, such as Red Head Versus Wejit, was being recorded on the drawings. The inspector reviewed the findings on the following hangers:

No. 34-GCB-5-H17 - Decay Heat Removal System  
No. 33B-GCB-10-H12 - Drain from 8" HBD-263 drain on PSV 319 and PSV 403.  
No. 33B-GCB-2-H2 - Drain from 8" HBD-263 drain on PSV 319 and PSV 403.

Typical findings were as follows:

- a. Data point location off. (Exact dimension was provided)
- b. Clearance was not maintained.
- c. All four fastening plates had holes burned.
- d. Gap between plate and wall.
- e. Drawings to be modified to reflect as-builts.

The IE:III inspector considered the inspection program satisfactory.